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COLD REGIONS RESEARCH AND ENGINEERING LAB HANOVER N H F/G 13/13  
SERIES 123 OF DWELLINGS FOR CLIMATIC REGION NUMBER 1 (SERIIA 12--ETC(U)  
DEC 76

UNCLASSIFIED

CRREL-TL-569

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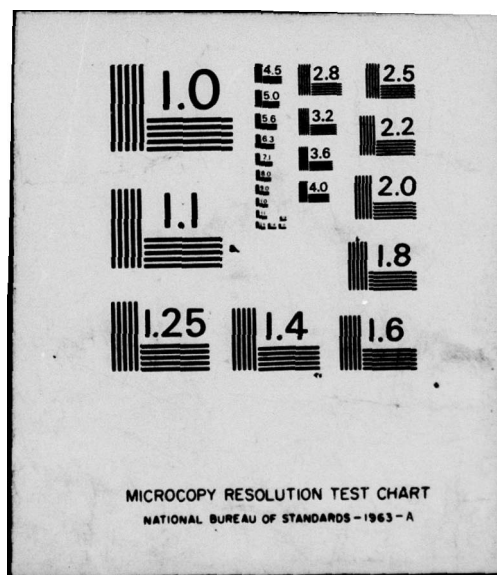
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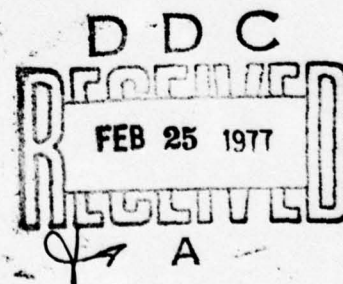
Draft Translation 569  
December 1976

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ADA 035972

SERIES 123 OF DWELLINGS  
FOR CLIMATIC REGION NO. 1

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CORPS OF ENGINEERS, U.S. ARMY  
COLD REGIONS RESEARCH AND ENGINEERING LABORATORY  
HANOVER, NEW HAMPSHIRE

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)  Series 123 includes projects for representative and sectional block apartment buildings, the use of which is envisioned in two regions: (a) seismic (seven units) and aseismic; (b) with and without permafrost soils in the building foundation; and (c) with calculated outside temperatures from -30 to -50°C.		



DRAFT TRANSLATION 569

⑥

Numbers

ENGLISH TITLE: SERIES 123 OF DWELLINGS FOR CLIMATIC REGION 1

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⑪ Dec 76

⑫ 19p.

AUTHOR: None

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~~Series 123~~ Leningrad, ~~Serialized, 1971~~

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SERIES 123 MULTISTOREY CONCRETE-BLOCK APARTMENT BUILDINGS FOR  
CLIMATIC REGION NO. 1

According to the task of Gosgrazhdanstroy [State Committee for Civil Construction and Architecture], projects have been worked out for two- to five-storey apartment buildings with walls of large keramzit-concrete blocks and lightweight concrete blocks for construction in climatic region No. 1 of the USSR during the period 1971-1975.

Series 123 includes projects for representative and sectional block apartment buildings, the use of which is envisioned in two regions: a) seismic (seven units) and aseismic; b) with and without permafrost soils in the building foundation; and c) with calculated outside temperatures from -30 to -50°C.

Apartment buildings will be constructed from projects of the series at Magadan and Magadanskaya Oblast, in the area of North Sakhalin and in the northern oil- and gas-bearing regions of Western Siberia.

Sectional representative and sectional-block buildings with latitudinal and meridional orientation and with type "A" (small) and "B" (large) apartments have been developed in these series.

Development of projects for sectional dormitories for workers or students has been proposed.

All the projects of the series were designed according to the requirements of SNiP II-L1-71 "Apartment Buildings. Design Standards," and also other normative materials which concern development of cost-estimate documentation for climatic region No. 1.

The buildings were solved in the design scheme with longitudinal supporting walls joined by floors on each storey. The height of a storey from ceiling to floor is 3.0 m.

The variants in configuration of the buildings and sectional blocks provide the required ratio of apartments calculated for one family: 35 percent in one-room apartments, 35 percent in two-room, 20 percent in three-room and 10 percent in four-room apartments. Five-room apartments are provided on the first floors of some sectional blocks.

All the apartments were designed with excess maximum utility area from Table No. 6 of SNiP II-L1-71 up to 10 percent.

The functional zoning principle was established in the planning solution of two-, three- and four-room apartments. The living and service spaces are conveniently connected to each other. The kitchens are solved as dining



room-kitchens with an area of 8-9 m<sup>2</sup>. All the bedrooms are insulated. Each apartment is equipped with a cabinet for drying clothing with natural exhaust and with closets.

Wind protection of the entrances is provided in the building projects. The facades have been developed in two versions of architectural solutions -- with and without balconies.

The engineering equipment of the buildings contains central heating, hot and cold running water, drain system, electricity, radio equipment, telephones, television terminals, garbage removal and cooking gas (with a variant of electric stoves).

Production of articles for the buildings of the series has been organized at plants of reinforced concrete articles or residential construction kombinats.

Transportation may be accomplished by ordinary truck transport, erecting-tower cranes or truck-mounted cranes with a capacity up to 5 tons.

Instructions are given in the work drawings on production operations in winter.

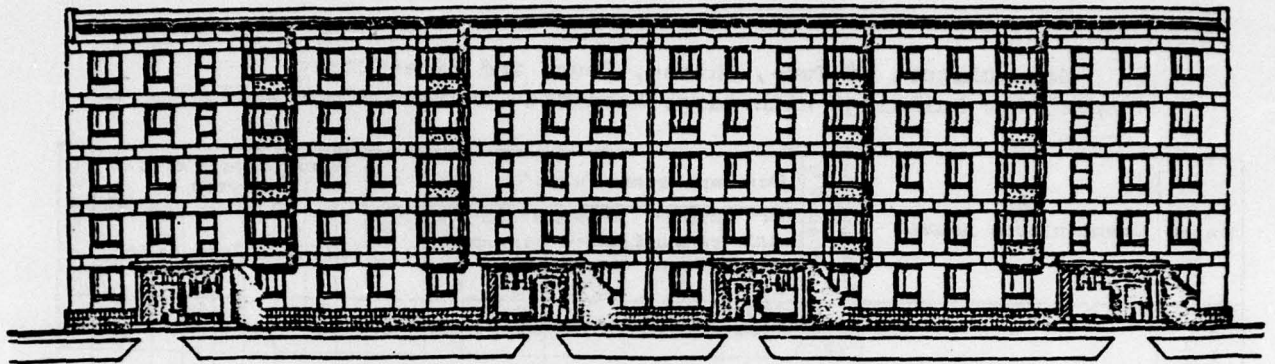
**Nomenclature of Two-, Three-, Four- and Five-Storey  
Apartment Buildings With Large Keramzit-Concrete Block Walls**

(1) Марка	(2) Схема планов домов	(3) Этажность	(4) Ориентация	(5) Основные показатели					K <sub>1</sub>	K <sub>2</sub>	(10) Количество и состав квартир										Всего Секунды, бал.	(12)
				(6) площадь застройки, кв. м	(7) строительный объем, м <sup>3</sup>	(8) жилая площадь, м <sup>2</sup>	(9) полезная площадь, м <sup>2</sup>	(11) общая														
								1а			1б	2а	2б	3а	3б	4а	4б	5а	5б			
2-секционные железные дома (13)	2Т-1-23	2	Ш	444,22	3832,90	381,40	858,84	0,57	7,45	-	4	-	4	-	4	-	-	-	-	12	-	
		4	Ш	444,22	8830,54	771,80	1316,84	0,58	8,98	-	8	-	10	-	6	-	-	-	-	24	-	
		5	Ш	444,22	7883,50	938,60	1619,30	0,57	7,14	-	10	-	12	-	8	-	-	-	-	30	-	
113-123-16		5	Ш	444,12	7701,10	944,40	1634,30	0,57	7,12	-	10	-	12	-	8	-	-	-	-	30	7	
-	2Т-1-23 2Ф-1-23	4	Ш	888,44	13881,08	1543,20	2833,28	0,58	8,98	-	16	-	20	-	12	-	-	-	-	48	-	
113-123-7		5	Ш	888,40	15462,45	1873,20	3238,80	0,57	7,18	-	20	-	24	-	16	-	-	-	-	60	-	
113-123-25		5	Ш	888,90	15413,50	1888,80	3288,80	0,57	7,12	-	20	-	24	-	16	-	-	-	-	60	7	
-	2Т-1-24 2Ф-1-24	2	Ш	918,38	7507,89	807,80	1380,24	0,59	7,27	-	8	-	8	-	4	-	4	-	-	24	-	
-	2Т-1-24 4Ф-1-23	5	Ш	1383,80	23849,00	2945,70	5040,00	0,58	7,00	-	30	-	34	-	18	-	8	-	-	90	7	
-	2Т-1-11-2-3-3	2	М	787,20	6806,80	596,20	1083,80	0,55	8,23	12	-	-	4	8	-	-	-	-	-	12	-	
		3	М	787,20	8922,20	890,50	1621,80	0,54	8,09	18	-	-	6	12	-	-	-	-	-	36	-	
-	2Т-1-22-2-3-4 1Ф-1-11-2-3-3	4	М	1182,37	18993,80	2081,00	3589,40	0,58	7,29	20	-	28	-	-	16	-	8	-	-	72	-	
		5	М	1255,41	21801,32	2574,35	4381,77	0,58	7,38	24	-	33	-	-	19	-	9	-	-	87	-	
14 Общественные места	270 мест (15)	3	М	1870,30	18544,30	1877,40	3245,20	0,43	11,00	-	-	-	-	-	-	-	-	-	-	-	-	
	388 мест	4	М	1848,50	23108,90	2398,80	5118,80	0,45	9,84	-	-	-	-	-	-	-	-	-	-	-	-	
	502 мест	5	М	1848,50	27943,40	3116,20	8392,00	0,48	9,00	-	-	-	-	-	-	-	-	-	-	-	-	
	524 мест	4	М	2183,90	30772,30	3250,40	8809,75	0,47	9,48	-	-	-	-	-	-	-	-	-	-	-	-	
	680 мест	5	М	2183,90	37219,00	4215,80	8507,15	0,47	8,83	-	-	-	-	-	-	-	-	-	-	-	-	

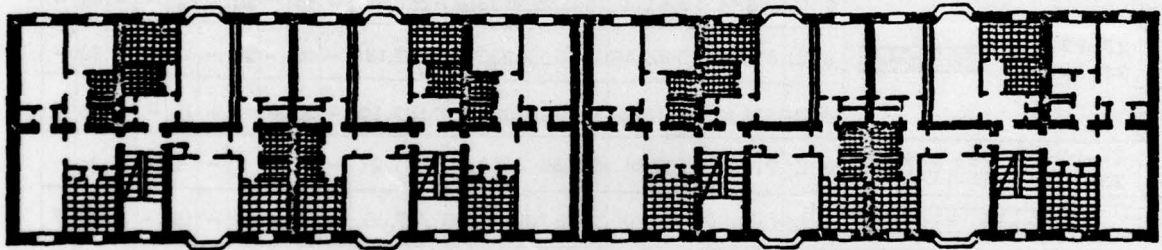
**KEY:**

- |  |  |
|--|--|
| 1. Mark                                      | 9. utility area, m <sup>2</sup>          |
| 2. Layout of buildings                       | 10. Number and composition of apartments |
| 3. Number of stories                         | 11. Total                                |
| 4. Orientation                               | 12. Seismicity, units                    |
| 5. Main indicators                           | 13. Two-section apartment building       |
| 6. area of construction site, m <sup>2</sup> | 14. Dormitories                          |
| 7. construction volume, m <sup>3</sup>       | 15. Beds                                 |
| 8. living area, m <sup>2</sup>               | 16. Latitudinal                          |
|  | 17. Meridional                           |

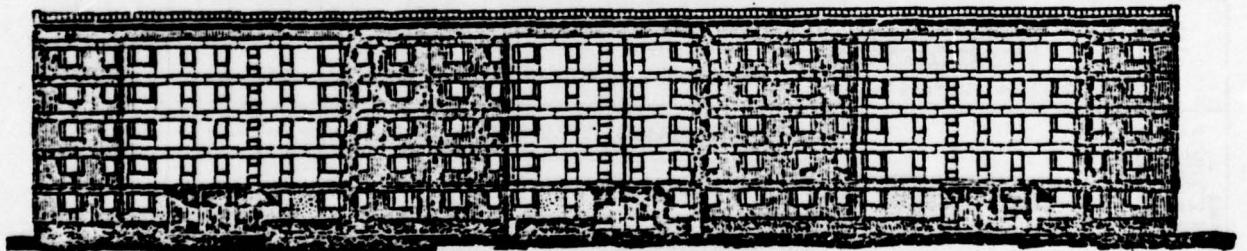




Five-Storey Four-Section 60-Apartment Building With Type B Apartments

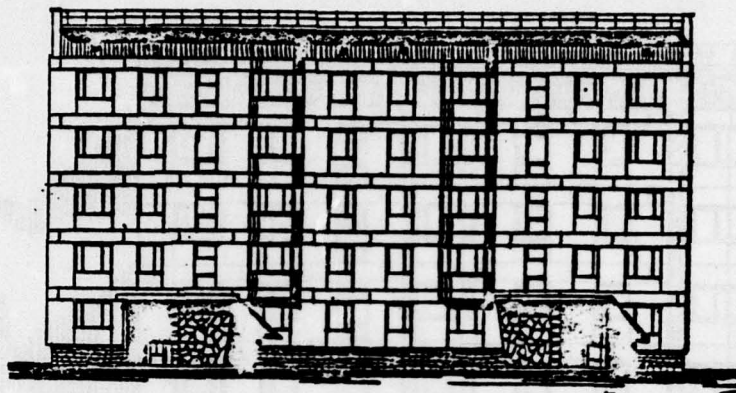


Typical Floor Plan

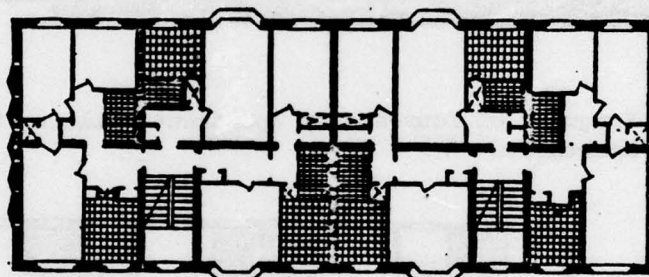


Five-Storey Three-Section 87-Apartment Building With Type A Apartments

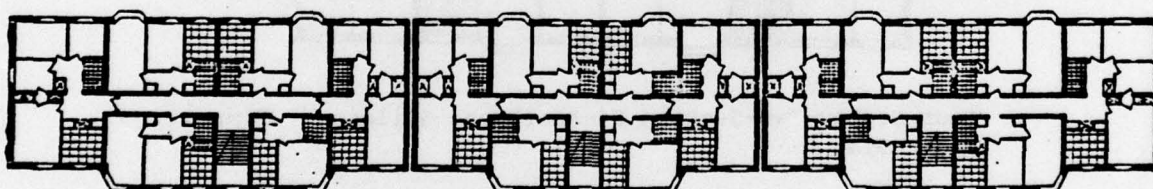




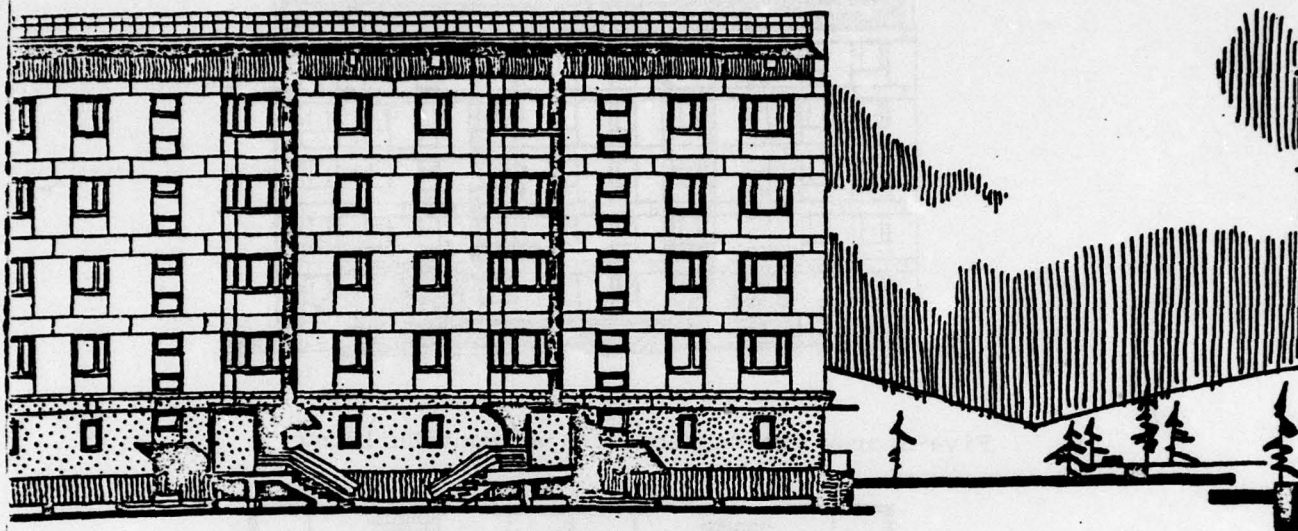
Five-Storey Two-Section 30-Apartment Building



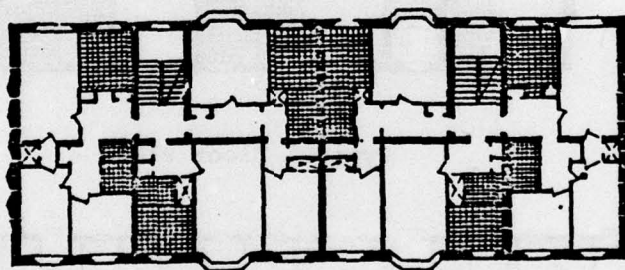
Typical Floor Plan



Typical Floor Plan

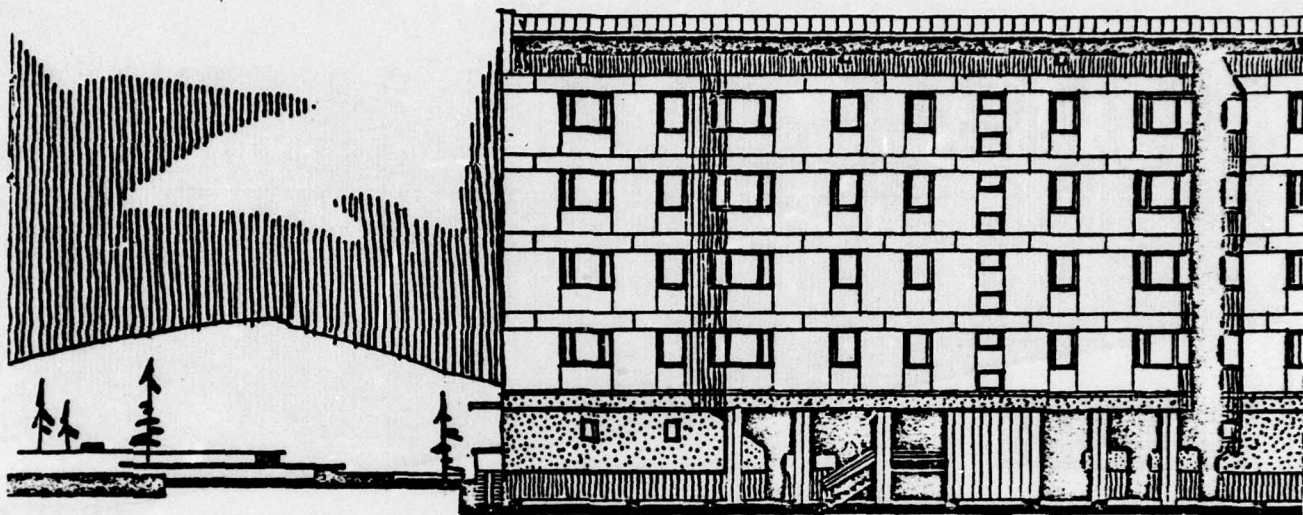


Fragment of Four-Storey Apartment Building With Type B Apartments

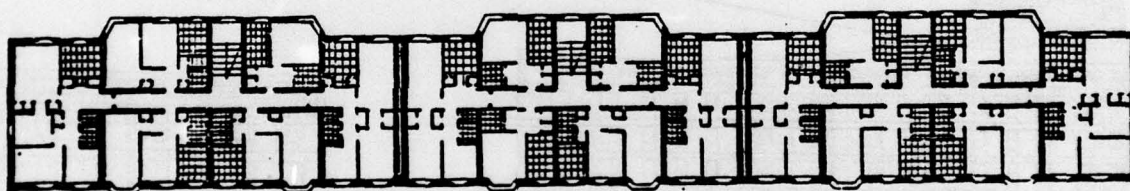


Four-Storey Two-Section 24-Apartment Building. Typical Floor Plan

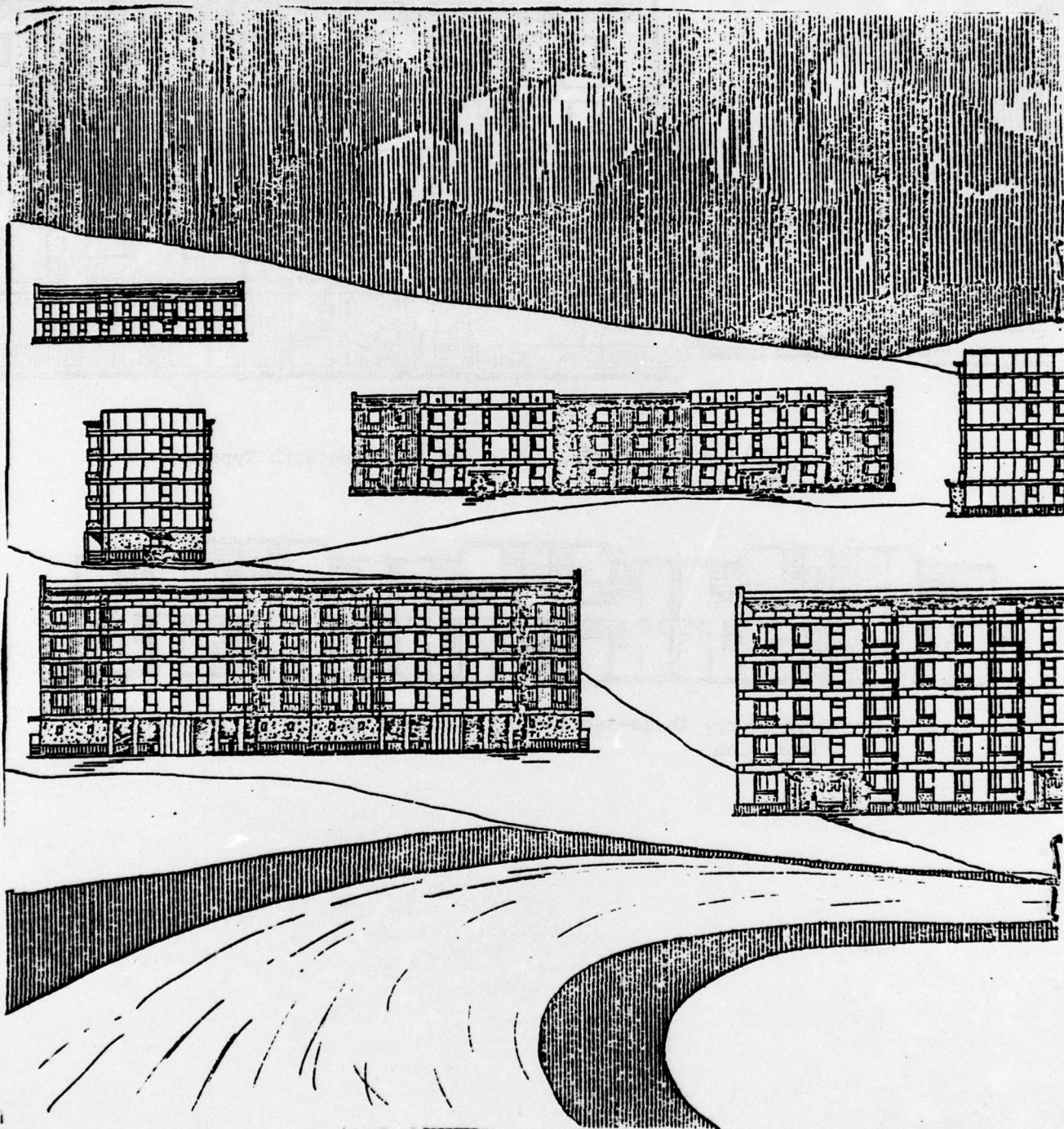




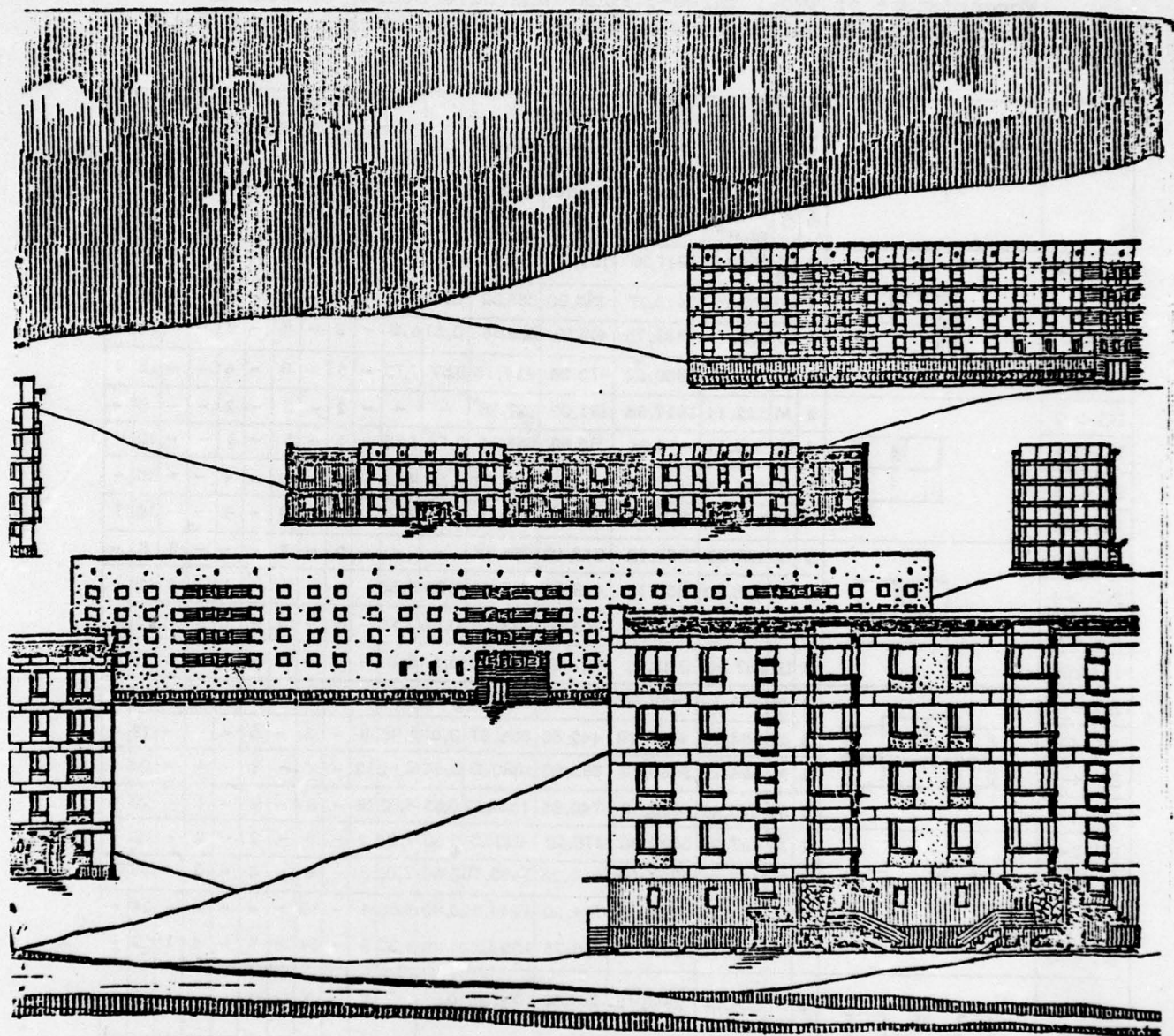
Fragment of Four-Storey Apartment Building With Type A Apartments



Four-Storey Three-Section 72-Apartment Building. Typical Floor Plan









**Nomenclature of Two-, Three-, Four- and Five-Storey Sectional  
Block Apartment Buildings With Large Keramzit-Concrete Block Walls**

(1) Марка	(2) Схемы планов блок-секций 2)	(3) Этажность	(4) Ориентация	(5) Основные показатели				K <sub>1</sub>	K <sub>2</sub>	Количество и состав (10)квартир / 3)										(11) всего	(12) сейсмичность, балл
				пло- щадь за- стро- ен. м <sup>2</sup> (6)	строи- тель- ный объём м <sup>3</sup> (7)	жилая пло- щадь (8)	пользо- вая пло- щадь (9) жилья														
										1а	1б	2а	2б	3а	3б	4а	4б	5а	5б		
БС-1-2		2	Ш	222,11	1917,96	191,00	327,28	0,58	-	-	2	-	2	-	2	-	-	-	-	8	-
БС-1-4		4	Ш	222,11	3415,27	385,80	658,32	0,58	8,85	-	4	-	4	-	4	-	-	-	-	12	-
БС-1-6		5	Ш	222,11	3831,75	468,30	809,85	0,57	8,20	-	5	-	8	-	4	-	-	-	-	15	-
123-05с		5	Ш	222,06	3850,50	472,20	817,15	0,57	7,12	-	5	-	8	-	4	-	-	-	-	15	7
БС-2-2		2	М	222,11	1917,96	191,00	327,28	-	-	-	2	-	2	-	2	-	-	-	-	6	-
БС-2-4		4	Ш	222,11	3415,27	385,80	658,32	0,58	8,85	-	4	-	5	-	3	-	-	-	-	12	-
БС-2-6		5	Ш	222,11	3831,75	468,30	809,85	0,57	8,20	-	5	-	8	-	4	-	-	-	-	15	-
123-06с		5	Ш	222,06	3850,50	472,20	817,15	0,57	7,12	-	5	-	8	-	4	-	-	-	-	15	7
БС-3-2		2	Ш	238,50	2033,12	213,10	358,78	-	-	-	2	-	2	-	-	-	-	-	2	8	-
БС-3-4		4	Ш	238,10	3659,15	429,60	709,52	0,60	8,56	-	4	-	4	-	-	-	-	-	4	12	-
БС-3-6		5	Ш	238,10	4102,00	528,90	874,75	0,60	7,90	-	5	-	5	-	1	-	-	-	4	16	-
123-03с		5	Ш	237,80	4123,45	527,95	885,70	0,59	6,81	-	5	-	5	-	1	-	-	-	4	15	7
БС-4-2		2	М	354,12	2945,43	294,40	538,28	0,55	7,85	6	-	2	-	4	-	-	-	-	-	12	-
БС-4-3		3	М	354,12	4107,79	442,55	808,37	0,55	7,65	9	-	3	-	6	-	-	-	-	-	18	-
БС-4-4		4	М	354,12	5635,72	592,60	1080,36	0,54	6,80	12	-	4	-	8	-	-	-	-	-	24	-
БС-4-6		5	М	375,40	6522,19	740,85	1333,27	0,55	8,80	14	-	5	-	9	-	1	-	-	-	29	-
БС-5-2		2	М	407,25	3502,35	370,20	620,36	0,60	7,02	2	-	6	-	2	-	2	-	-	-	12	-
БС-5-3		3	М	407,25	4724,10	558,25	1055,76	0,60	7,02	3	-	9	-	3	-	3	-	-	-	18	-
БС-5-4		4	М	407,25	6549,30	744,20	1244,52	0,60	8,80	4	-	12	-	4	-	4	-	-	-	24	-
БС-5-6		4	М	433,13	7520,63	916,75	1524,25	0,60	8,20	5	-	14	-	5	-	4	1	-	-	29	-
БС-6-2		2	М	354,12	2945,43	294,40	538,28	0,55		6	-	2	-	4	-	-	-	-	-	12	-
БС-6-3		3	М	354,12	4107,79	442,55	808,37	0,55		9	-	3	-	6	-	-	-	-	-	18	-

**KEY:**

- |  |   |
|--|---|
| 1. Mark                                      | 8. living area, m <sup>2</sup>                    |
| 2. Layout of sectional blocks,               | 9. utility area of living section, m <sup>2</sup> |
| 3. Number of stories                         | 10. Number and composition of apart-<br>ments     |
| 4. Orientation                               | 11. Total   |
| 5. Main indicators                           | 12. Seismicity, units                             |
| 6. area of construction site, m <sup>2</sup> | 13. Latitudinal                                   |
| 7. construction volume, m <sup>3</sup>       | 14. Meridional                                    |

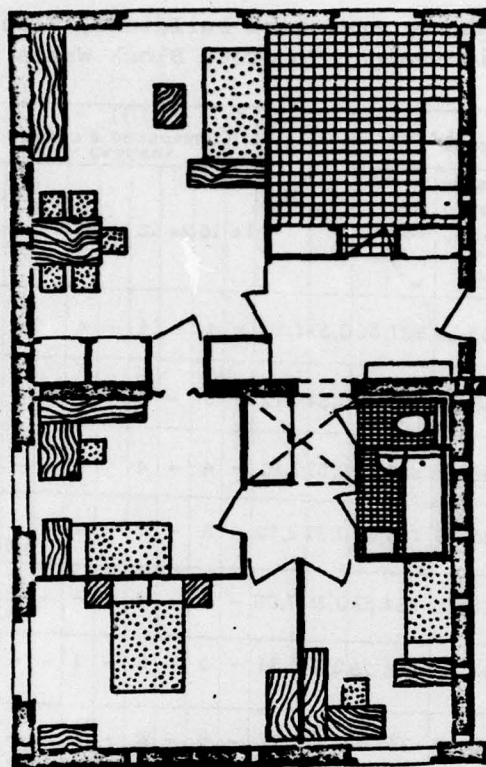
**Nomenclature of Four- and Five-Storey Apartment Buildings, Block-Sections and Dormitories With Lightweight Concrete Block Walls**

(1) Марка	(2) Схема планов домов и блок-секций	(3) Этажность	(4) Ориентация	(5) Основные показатели					K <sub>1</sub>	K <sub>2</sub>	(10) Количество и состав квартир										(11) всего	(12) Сейсмичность, балл
				пло- щадь за- строй- ки, м <sup>2</sup> (6)	строи- тельный объем, м <sup>3</sup> (7)	жилая пло- щадь, м <sup>2</sup> (8)	полез- ная пло- щадь, м <sup>2</sup> (9)	1а			1б	2а	2б	3а	3б	4а	4б					
БС 1-4		4	Ш	223,30 (13)	3405,17	388,20	637,52	0,577,10	-	4	-	4	-	4	-	-	12	-				
БС 1-5		5	Ш	223,30	3825,50	448,35	785,35	0,577,12	-	5	-	6	-	4	-	-	15	-				
БС 2-4		4	Ш	223,30	3405,17	388,20	637,52	0,577,10	-	4	-	4	-	4	-	-	12	-				
БС 2-5		5	Ш	223,30	3825,50	448,35	785,35	0,577,12	-	5	-	6	-	4	-	-	15	-				
БС 3-4		4	Ш	239,35	3871,73	409,20	684,52	0,597,08	-	4	-	4	-	-	-	4	12	-				
БС 3-5		5	Ш	239,00	4140,25	503,40	846,25	0,596,81	-	5	-	5	-	1	-	4	15	-				
2-секцион- ный жилой дом (15)		4	Ш	448,60	6810,35	738,40	1275,04	0,577,27	-	8	-	8	-	8	-	-	24	-				
		5	Ш	448,60	7851,00	898,70	1570,70	0,577,47	-	10	-	12	-	8	-	-	30	-				
4-секцион- ный жилой дом (16)		4	Ш	923,60	14164,80	1554,80	2844,08	0,587,18	-	16	-	16	-	8	-	8	48	-				
		5	Ш	923,60	15937,40	1903,50	3283,20	0,587,29	-	20	-	22	-	10	-	8	80	-				
(17) общая жилая площадь мест		4	М	1670,30	23450,20	2398,80	511860	0,459,78 (общая (11))	-	-	-	-	-	-	-	-	-	-				
		5	М	1670,30	28358,10	3116,20	839200	0,489,00 (общая)	-	-	-	-	-	-	-	-	-	-				
		4	М	2215,40	31223,35	3250,40	8809,75	0,473,65 (общая)	-	-	-	-	-	-	-	-	-	-				
		5	М	2215,40	37764,45	4215,80	8507,15	0,498,93 (общая)	-	-	-	-	-	-	-	-	-	-				

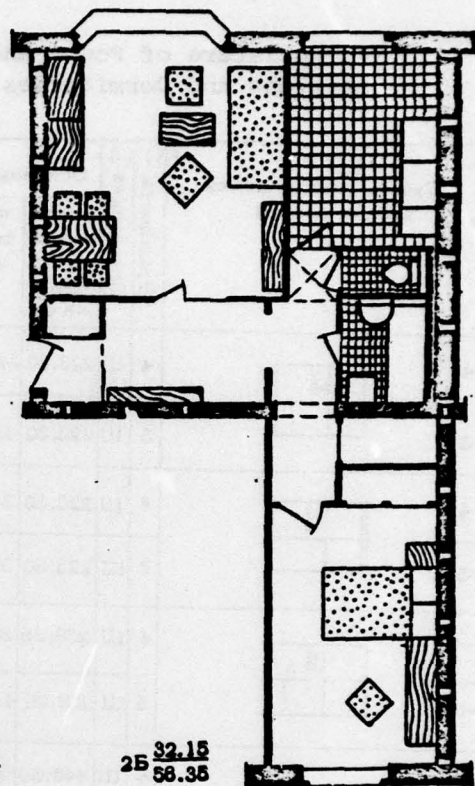
**KEY:**

- |  |                                     |
|--|-------------------------------------|
| 1. Mark                                      | 11. total                           |
| 2. Layout of buildings and sectional blocks  | 12. Seismicity, units               |
| 3. Number of stories                         | 13. Latitudinal                     |
| 4. Orientation                               | 14. Longitudinal                    |
| 5. Main indicators                           | 15. Two-section apartment building  |
| 6. area of construction site, m <sup>2</sup> | 16. Four-section apartment building |
| 7. construction volume, m <sup>3</sup>       | 17. Dormitories                     |
| 8. living area, m <sup>2</sup>               | 18. beds                            |
| 9. utility area, m <sup>2</sup>              |                                     |
| 10. Number and composition of apartments     |                                     |

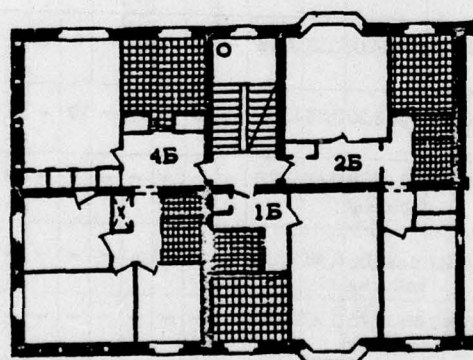




4Б  $\frac{53.30}{81.95}$

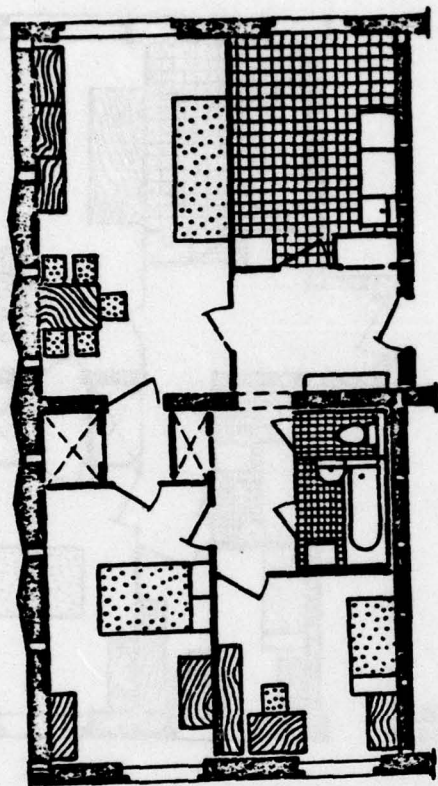


2Б  $\frac{32.15}{58.35}$

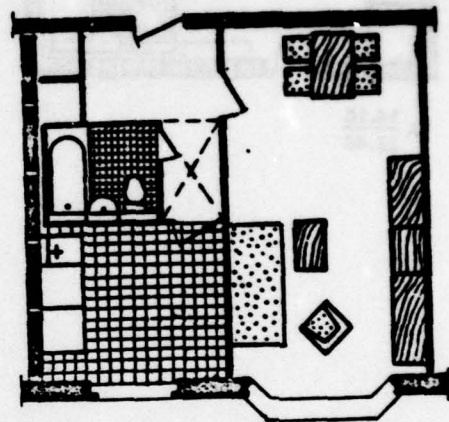


Слок-секция Т-1Б-2Б-4Б

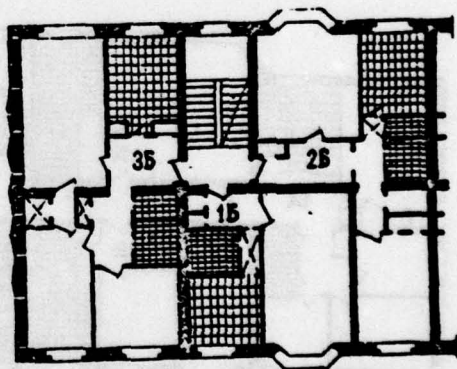
Sectional Block T-1B-2B-4B



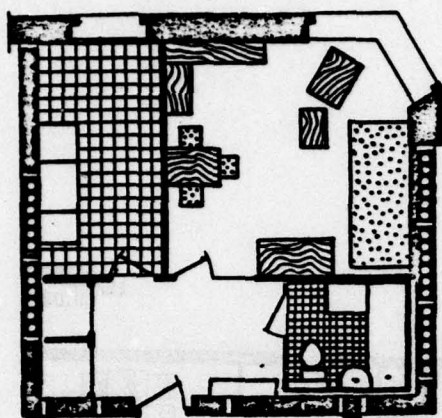
35  $\frac{12.35}{69.15}$



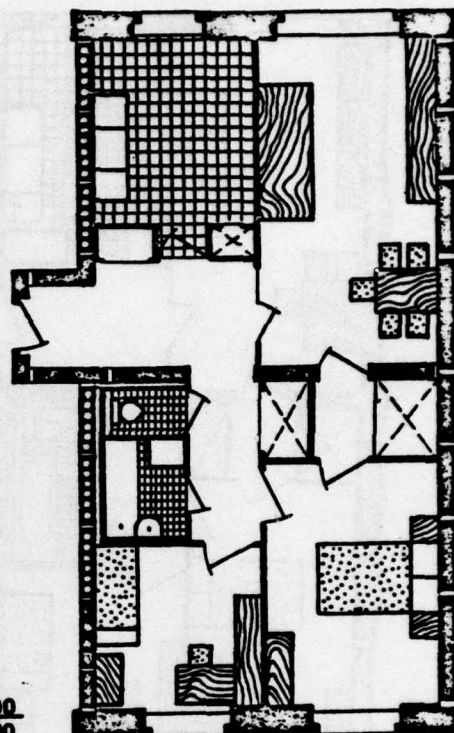
15  $\frac{21.25}{39.08}$



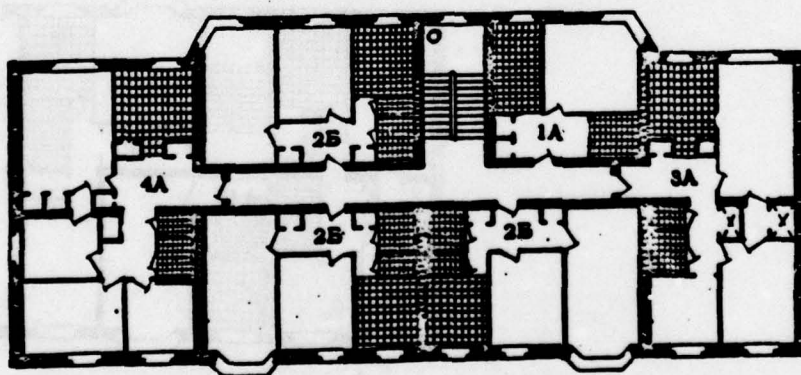
End Sectional Block for 15 Apartments



1A  $\frac{14.15}{31.43}$

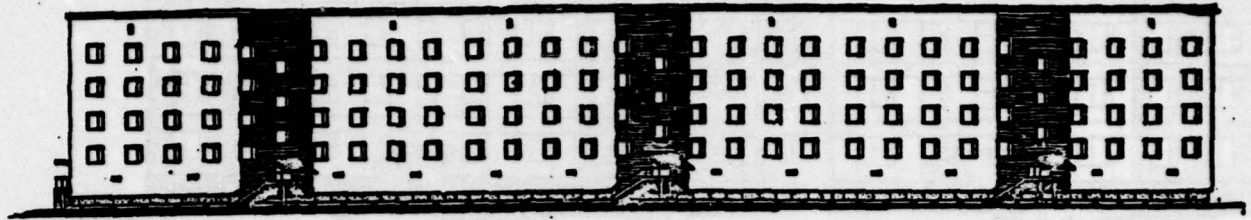


3A  $\frac{38.00}{63.80}$

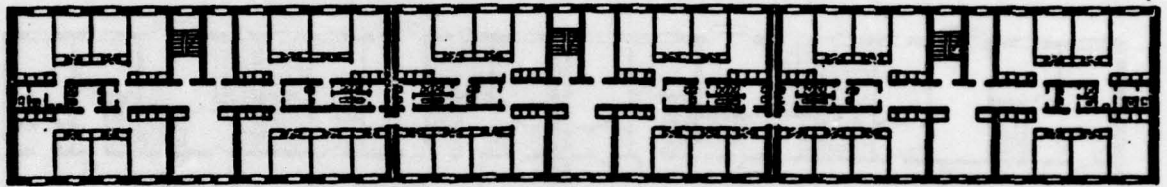


Sectional-Block Building in Rows for 15 Apartments

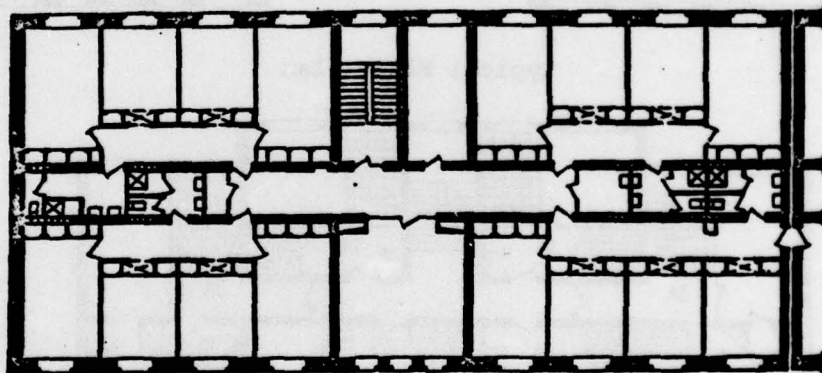




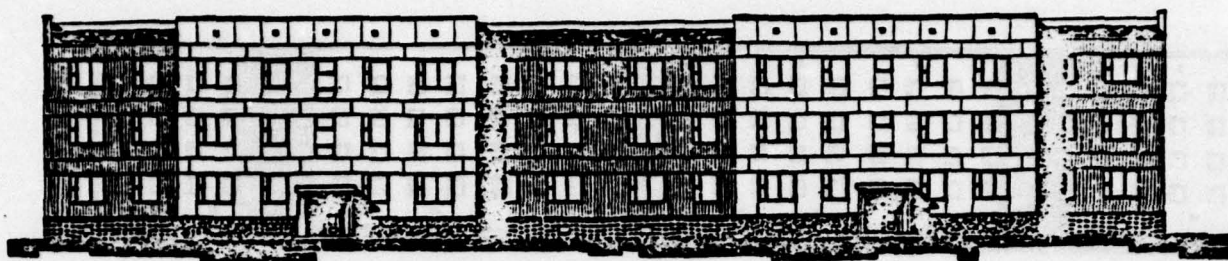
Four-Storey Three-Section Dormitory



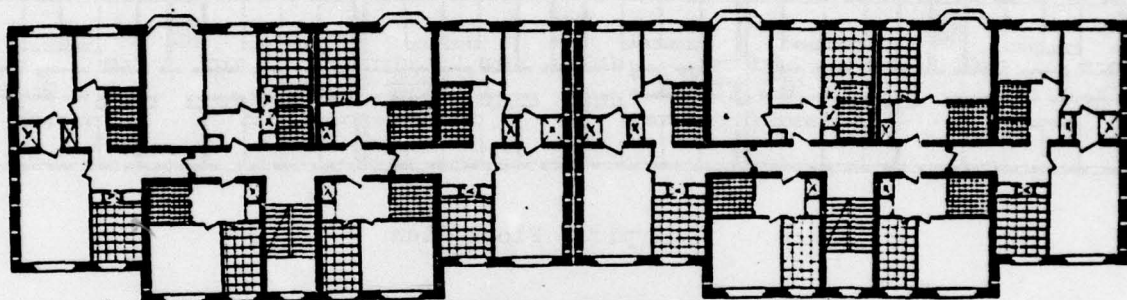
Typical Floor Plan



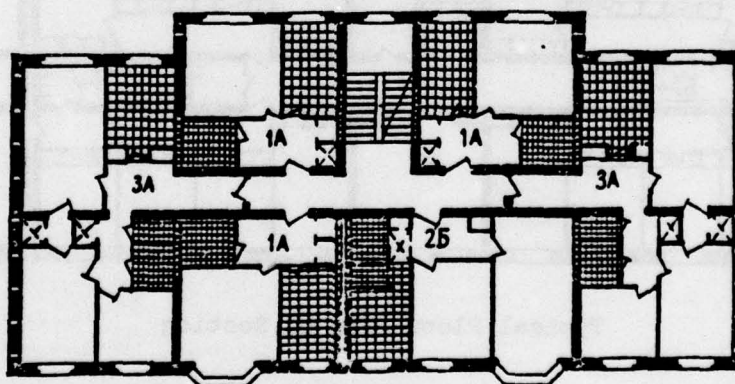
Typical Floor Plan of Section



Three-Storey Two-Section 36-Apartment Building



Typical Floor Plan



End Section T-1A·1A·1A·2B·3A·3A